ESRI Web Apps & Story Maps

ArcGIS Online offers a suite of configurable web apps that let you share your map with others in a customized way. You can choose a pre-designed app or use the Web AppBuilder to create customized apps.

Getting Started
First, create a map in ArcGIS Online, which you will then share using an app. Our sample data includes the location and time of wildlife sightings in City Forest in Bangor, Maine. You will create basic maps of the sightings and use the Time Aware app to view the data over time. We will then embed this map into a StoryMap, and add in additional media.

1. Log into ArcGIS Online (http://www.arcgis.com) using the login you created earlier (if you do not have one, email gishelp@mit.edu). If you are not associated with MIT, you can create a public account.
2. After logging in, click on Map at the top left of the screen, to open a new blank map. Several tours will display on the left, if you want to learn more about ArcGIS Online on your own. (This may look different with a public account.)
3. Click Basemap and select a background suitable for this project (you can change this anytime).
Adding Data

1. The Bangor data has already been uploaded and shared with everyone at MIT. To find it, click on Add > Search for Layers.
2. In: > My Organization should already be automatically selected. (If you are using a public account, change My Organization to ArcGIS Online.) Type ‘city forest bangor’ in the search box.
3. Click “Add” to add the following data layer to your map.

There are many other ways to add data to your map. The Add data drop down menu lets you add a data layer from your computer via Add Layer from File, or link to data available on the web via Add Layer from Web. When searching for layers, you can change My Organization to ArcGIS Online to search all the data uploaded by ArcGIS Online users.

4. This is the only data layer we will use for now, so click Done Adding Layers at bottom of screen.

Customizing how data layers are displayed

This data layer is time enabled; meaning ArcGIS Online recognizes that one of the data columns includes a time stamp. If you need to make your own data time aware, you can use these instructions. This specific layer has been configured to only display the sightings that occur during each 3-month period.

1. Click the play button at the bottom-middle of the screen to see the sightings over time. Take a moment to play with the time settings ( ). Can you change the time period to 6 months? Switch it back to 3 months when you are finished.

This map is useful for seeing the number and locations of animal sightings over time. We will create a copy of the data layer so we can differentiate the types of animals that were seen.

2. Click on the name of the data layer and look for the three blue horizontal dots to appear below.
3. Click this, and from the drop down menu select Copy.
4. Turn off the original data layer by unchecking the box next to its name.
5. Open the drop down menu for the copy of the data layer and **Disable Time Animation** so you can see all the animal sightings at once. Now let’s look at individual animals based on species.
6. Click the **Change Style** button ( ) under the name of the data layer.
7. In box #1, select Name_1 for **Choose an attribute to show**, which is the name of the animal sighted. Make sure **Types (Unique symbols)**, in box #2 is selected for the drawing style.
8. Click on the Options button.

9. ArcGIS Online automatically grouped together animals with a low number of points (sightings) on the map into an “Other” group. You can keep the grouping the way it is, or put other animals into the group by dragging the three, vertical dots next to the name. Click on the up arrow to the right of an individual name to move it out of the group. You can also change the name of the group (or an individual attribute). In the example below I made a group called “Bird”. Note: Currently, there isn’t a way to create more than one group or to re-group items if you ungroup them all at once, unless you start your visualization again.

10. Click Ok when you are finished visualizing the animals, and then Done. Note: If you noticed the option to create a heatmap, another interesting way to visualize point data, feel free to create another copy of the data layer and create a heat map in addition to symbolizing the specific points. You can also experiment with other options.

11. Rename your different data layers so they describe the map that is being shown (you might use something like ‘wildlife heat map’, ‘wildlife by animal type’, etc.)
Creating a Web App

1. Click Save at the top of the screen to save your map. You will be required to enter a title and tags (click enter after typing in the name of each tag).
2. Make sure only the original time-enabled layer is checked.
3. Click “Share”. For the moment we’ll keep the map private, but you have the option of sharing the map with others at MIT, the public, or a private group that you create. Click the Create a Web App button.
4. Enter ‘time’ in the search box and select the Time Aware App. Click Create Web App.

5. You will be asked to enter information about your web app and then click Done.
6. Explore the settings across the top of the screen to customize the app. When embedding the app in a Story Map, you may not want to display a title, information box, etc. since you will be describing the map as part of the story.

7. Click the Save button at the bottom of the screen when you are finished configuring the app.
8. Click the Launch button to see your finished app. The app is interactive so viewers can start and stop the timeline or move the timeline slider in order to see all the sightings at once. The share button at the top of the screen will give you a link to the map, however since we kept it private, only you will be able to access it for now. We will use the link for the app in the Story Map, so you may want to keep it open.
9. If you hit “Close” on the web app creator that is open in the previous tab, it will bring you to the details about the app you just created. If you want to share it with others, click the Share button to change the settings. Want to come back to your app or map later? Click My Content when you are logged into ArcGIS Online to see a list of everything you have created. Click the drop down arrow next to an item’s name to view and change the item’s settings or to open it.
Creating a Story Map

Esri Story Maps let you combine maps with narrative text, images, and multimedia content. Any maps (and most apps) you create in ArcGIS Online can be embedded in a Story Map.

Like the apps, there are a variety of pre-defined Story Map layouts or you can create your own customized layout. Look at the gallery for inspiration and to see examples of each layout.

1. Choose the layout you wish to use from the Story Map App list ([https://storymaps.arcgis.com/en/app-list/](https://storymaps.arcgis.com/en/app-list/)). In this example we will use the Story Map Journal; scroll down to find it and then click Build. You may be asked to re-sign into your ArcGIS account.
2. Choose whether you want a side or floating panel (you can change this later on).
3. Enter a title for your map. You will then be prompted to add the first piece of information to your journal.
4. Learn about each type below and then mix and match to create a journal about City Forest (or a topic of your choosing). After you choose the type of content, you will be prompted to choose what is displayed in the main panel (main stage) and side panel. The side panel configuration will be the same for each type of content.

Here is an outline of a story map we made with the City Forest data: [http://arcg.is/2htZSKQ](http://arcg.is/2htZSKQ). The gallery is a good place to look for real world examples. Create your own Story Map with this data or use your own!

Content Types

Map
- Choose ‘Select a map’ to add a map you have already created and have saved in your ArcGIS Online account. Choose ‘Create a map’ to create one in ArcGIS Online.
Once your map is created or selected, choose the location that will display on the map (Location), which data layers to display (Content), and whether there are Pop-ups (e.g. you could have an animal’s pictures pop up as you hover over each data point if this was part of your dataset). You can also choose to display a legend or display an overview, inset map.

- We extracted the data for hares and bears and created new data layers, which are shared in ArcGIS Online (Search by going to Add > Search for Layers and type 'bangor city forest' again). Feel free to use these data layers to create a new map. You can also experiment with the tools in ArcGIS Online to create a new visualization, or search for new datasets.

Image
- Upload an image (it will be saved to your ArcGIS Online account – there is limited storage), connect directly to Flickr or Google + (images must be public), or link to an image online.
- You can choose how you want your image displayed.

Video
- Connect to a video on YouTube or Vimeo (must be public) or link to one online.
- As with an image, you can choose how the video is displayed in the main stage.

Web page
- Embed a webpage. Depending on the format of the page, it may or may not work.
- It usually looks best if you choose the website to fill the main stage.
- If it will not open properly, include a link in your side bar text or take a screen shot.
- Use this option to embed a web app in your map, by inserting the link to your app.
Side Panel
- Enter text that is related to your main panel. You can embed links, images, videos, or an action.
- Actions will change something in the main panel when clicked on. Highlight the text that you want to be linked to an action. When a viewer clicks on this text, the main panel will change.
  - The ‘Change Main stage Content’ button ( ) will let you configure the map for this section of the text. This is a good way to change which layers are displayed on the same map or change the map completely.
  - ‘Locate an Address or Place’ ( ) will place a marker at an address and zoom there.
  - ‘Navigate to a Section’ ( ) will allow you to link to another section of the story map.

Sharing your Map
1. After you have created your Journal, save it, and use the Share button to change the sharing settings. The share settings of any embedded maps or data should be automatically updated to match the share settings of the Story Map. You can check the settings in the My Content section of ArcGIS Online.

Change the sharing settings by selecting ‘View Item Details’ from the drop down list next to the name of the item and click the Share button.

2. Click the Share button to get the link or embed code for your map. To edit your map, go to the My Content section of ArcGIS Online. It will be listed as a Web Mapping Application. Any maps you created in your Story Map will also be listed here.

Help Resources
- Embedding apps and websites in Story Maps
- How to make a time-aware Story Map
- Story Maps Resources
- Create apps from maps
- ArcGIS Online help

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